LITHOGRAPHIC ABSTRACTS

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LITHOGRAPHIC ABSTRACTS, JANUARY 1960

PHOTOGRAPHY, TONE AND COLOR CORRECTION

*DEVICE FOR VIEWING NEGATIVES AS POSITIVES. U.S. Patent 2,883,556. 250/213.5/31/56-4/21/59. D. H. Jenny and E. E. Loebner to RCA. Ansco Abstracts, Vol. 19, No. 6, June 1959, page 289. An electroluminescent layer between 2 conductive coatings, energized by an alternating current, is quenched by infrared radiation transmitted through the negative transparency. The negative may be placed between an infrared-radiating phosphor and the photo-conductor.

COLOUR WORK (10). Frank H. Smith. The Lithographer and Offset Printer, Vol. 55, June-July, 1959, pp. 32, 34, 36, 3 pages. Integral mask negative colour materials such as Ektacolor, Kodacolor and Icicolor are described. Their advantages for graphic arts use are cited as: 1. Color positive prints for customer approval and as a guide for retouchers. 2. Continuous tone separation positives with some correction can be made directly from the color negative.

ILLUMINATION IN THE GRAPHIC ARTS. J. Halliday. The Litho-Printer, Vol. 2, No. 7, July 1959, pp. 14, 17, 2 pages. Light sources for illuminating copy and for various printing down operations include arc, mercury vapor, tungsten, fluorescent and Xenon tubes, and now most recently, electronic flash. Each is discussed in relation to the use requirements to which it is put.

ELECTRONICS IN THE PRINTING INDUSTRY. H. W. Cox. Printing Technology, Vol. 3, No. 1, Sept. 1959, pp. 29-39, 11 pages (including discussion). The contributions of electronics to the printing industry are reviewed in relation to: illustration correction (gamma control) leading to electronic scanners and engravers; color correction; photo-composing (typesetting); electrostatic printing; and character reading. The entire discussion is on an abstract basis with no reference to specific equipment by name.

THE GAMMATRON: A METHOD OF DEVELOPMENT CONTROL. H. B. Archer. Printing Technology, Vol. 3, No. 1, Sept. 1959, pp. 41-53, 13 pages (including discussion). The Gammatron is an automatic developing machine which monitors the density of the photographic material during development and stops development automatically at any predetermined level, making degree of development independent of temperature, developer activity or emulsion contrast. The principle is explained and the results illustrated by graphs. A production prototype of the instrument is shown in perspective line drawing and some possible applications listed.

THINKING MAN'S SOLUTION TO THE "IMPOSSIBLE" JOB. John Pince. National Lithographer, Vol. 66, No. 9, Sept. 1959, pp. 36-7, 134, 3 pages. A description of how planning the camera room end of the work on a short time limit job saved a great deal of time. Much of this planning was built around a register system using a jig for locations.

PROCEDURES FOR COLOR STRIPPING. John M. Lupo, Jr. and Edward M. Whiting, Jr. Modern Lithography, Vol. 27, No. 9, pp. 43-6, 161, 164, 169, 7 pages, Sept. 1959. Most important in color stripping is proper positioning for register. The most widely used of many procedures are discussed. Negative plates (surface or presensitized) and positive plates (deep etch) are explained. Procedures for color stripping for both types are given in some detail with the aid of very complete schematic diagrams. Use of various materials such as goldenrod, Dinolith Stripping Base, Dinoblueline, and transparent adhesive tapes is explained.

REPRODUCTION TO ACCURATE SIZE. PART 4. CALCULATING THE FOCAL LENGTH. Frank H. Smith. Modern Lithography, Vol. 27, No. 9, Sept. 1959, pp. 55-6, 59, 164, 4 pages. Tests were given in a previous installment to check whether the chart furnished with the camera used a really accurate focal length for the lens. This installment carries on with the calculations which give the focal length of a lens to a high degree of accuracy. The illustrative procedures are carried out in some detail for the benefit of readers with less mathematical facility. The next step is the preparation of a camera chart using the focal length of lens as determined, for various values of scale percent. This is also carried out in example with considerable explanatory detail.

TIPS ON PHOTO CONTACT WORK. Dick Arden. Graphic Arts Monthly, Vol. 31, No. 9, Sept. 1959, pp. 94, 96, 100, 102, 4 pages. Author makes the specific suggestion that for contact negatives and positives a developer of the type of Kodak D-72 or Dupot 53-D be used instead of the usual lith type developer. Addition of bromide or benzotriazole is recommended. Time is saved in exposure and development and quality is gained. How these advantages work out are explained in some detail.

WHAT YOU SHOULD KNOW ABOUT MAGNIFIERS. Part 2. (Conclusion). Axel Lundbye. Gravure, Vol. 5, No. 9, Sept. 1959, pp. 29-30, 32, 34. Common aberrations, relatively unimportant in low power glasses, become more important in higher power magnifiers. These aberrations are explained, and some of the effects illustrated. Diagrams are given of various forms of multiple lenses. Measuring magnifiers are discussed and several built-in scales shown. A new development discussed briefly is the Bausch and Lomb pocket surface comparator. Care, cleaning, and use of magnifiers ends the article.

IMPROVED COLOR SEPARATION FROM TRANSPARENCIES. Joseph P. Halbherr. Gravure, Vol. 5, No. 9, Sept. 1959, pp. 38-9, 66-7, 4 pages. Contrast of transparencies, the necessary range adjustment, and the resulting tonal rendition are examined with the conclusion: "For purposes of consistency, our thought is that it is more practical to produce results with consistent tonal characteristics, especially in the range of lighter tones." Gamma of transparencies and reflection copy are discussed with the conclusion that a gamma of 0.67 is best in the negative separations due to the fact that most transparencies have a gamma of approximately 1.5. A technique is given based on these assumptions, with development control to get desired gamma, exposure control for density, and flash for excess density or range control. A densitometer is used.

ELECTRONIC COLOR SEPARATOR MAKES POSITIVES OR NEGATIVES. Robert Brunhouse. Printing Production, Vol. 89, No. 12, Sept. 1959, pp. 62-3, 2 pages. Article is abstract of address delivered before 13th Congress, International Photoengravers, Monte Carlo, Monaco, May 1959. The Fairchild Scan-A-Color is an electronic device which will produce simultaneously a set of fully color corrected continuous tone separations on film in less than an hour. The equipment is described with the aid of functional diagrams of the gamma correction computer and the ink correction computer. The prototype model is illustrated and the wide variety of fundamental controls possible with the computer are listed.

REPRODUCTION TO ACCURATE SIZE: PART 5. THE "VERNIER PHASE PATTERN" METHOD OF CHECKING SIZE. Frank H. Smith. Modern Lithography, Vol. 27, No. 10, Oct. 1959, pp. 56-8, 126, 4 pages. Illustrated explanation of the method and its use, said to be simple in use, highly accurate, and free of all patent or other charges. It is based on the coincidence (or lack of it) of repeating parallel line patterns. The explanation goes into the geometry involved.

CARE OF FLATS AFTER STRIPPING. Bernard R. Halpern. National Lithographer, Vol. 66, No. 10, Oct. 1959, pp. 45, 88, 101, 3 pages. A chapter of the book "Offset Stripping Black and White" published by the Lithographic Technical Foundation. Considerations and methods for handling flats after they have served their first use are given. Some of these include storage of flats; inspection for reuse involving injuries, dimensions, dated matter; changes in flats involving changing films, etc. A check list on the checking of flats is given.

CALCULATION OF SMALL COLOR DIFFERENCES. F. L. Wurzberg, Jr., Alfred DiBernardo, and James R. Cleary. Journal of the Optical Society of America, Vol. 49, No. 10, Oct. 1959, pp. 974-80, 7 pages. Authors' Abstract. Photoelectric colorimeters can be used as differential instruments to determine the ratios of tristimulus values of similar coloring materials to a high degree of precision. In the past, the difficult and time-consuming methods of calculating color coordinate differences from such data have seriously hindered their practical usefulness. It is shown that such calculations can be very greatly simplified for small color differences by making use of an approximation that becomes increasingly better as the color differences become smaller. 10 references.

PHOTOGRAPHIC EFFECTS WHEN USING ELECTRONIC FLASHES FOR CONTINUOUS TONE COLOUR SEPARATIONS. R. von Wartburg. Der Polygraph, 13-1959, 5 July 1959, pp. R19-R20, 2 pages. To be continued. (In German)

THE REPRODUCTION OF VALUABLE PAINTINGS TRUE TO NATURE. Anonymous. Der Polygraph, 13-1959, 5 July 1959, p. R17, 1 page (in German).

SCREEN SELECTION ACCORDING TO THE PAPER STOCK. Heinz Peterknecht. Der Polygraph, 13-1959, 5 July 1959, pp. R18-R19, 2 pages (in German).

STABLE SIZE FILMS. Anon. Der Polygraph, 14-1959, 20 July 1959, pp. 632-3, 2 pages (in German).

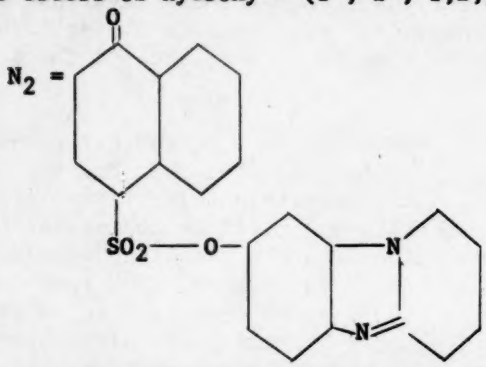
ELECTRONIC FLASH IN REPRODUCTION PHOTOGRAPHY. Karl Stötzer. Der Polygraph, 18-1959, 20 Sept. 1959, pp. 884-5, 2 pages (in German).

PLANOGRAPHIC PRINTING PROCESSES

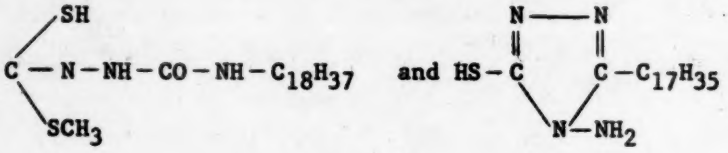
*PLANOGRAPHIC METAL PRINTING PLATES. U. S. P. 2,882,153-4. 96/75. 2/4 & 5/3/54 - 4/14/59. B. Cohn to Polychrome Corp. From Ansco Abstracts, Vol. 19, No. 6, June 1959, Abs. 772. A smoother surface or less halation is achieved in a metal plate if prior to its treatment with a silicate solution it is subjected to etching with 10% phosphoric acid at 90-95 C for 1-1.5' (2,882,153) or to a sandblasting (2,882,154) respectively. A longer press life results if the silicate coating, applied at 55-58 C, is hardened by immersion in a 5% calcium nitrate solution for 2' instead of an acid treatment. After rinsing in acidified water and drying, the plates are ready for sensitization with a diazo compound. 9 and 6 process and plate claims respectively.

*POLYACRYLATE-COATED PAPER PRINTING PLATES. Brit. 812,508. 4/1/57 - 4/29/59. J. L. Beatty to A. B. Dick Co. From Ansco Abstracts, Vol. 19, No. 6, June 1959, Abs. 771. The paper support is coated with polyacrylic acid (Polyco-437, Rohm & Haas) which is solubilized by ammonia or ammonium carbonate together with zinc, magnesium, calcium, lead or barium oxide or hydroxide, which form insoluble polyacrylates on drying, and a filler such as clay. The ratio of polyacrylic acid to filler plus metal oxide is 1:2-10 and that of metal oxide to filler is 1:2-20. 12 method and plate claims.

*PRINTING PLATES WITH QUINONEDIAZIDE SULFONIC ACID ESTERS. Ger. Appl. 1,058,845. 57d. 2/01 2/11/58. W. Neugebauer to Kalle & Co. From Ansco Abstracts, Vol. 19, No. 7, July 1959, Abs. 876. The light-sensitive quinonediazide sulfonates are esters of hydroxy - (1', 2', 1,2,)-pyridobenzimidazoles, e.g. They can be developed either with an organic solvent for the unexposed esters or with 3% trisodium phosphate solution which removes the photoreaction product. To render the image visible either some eosin can be added to the coating or some diazosalicylic acid which produces a red print-out image.



*INK RECEPTIVE SILVER SALT IMAGES. Ger. Appl. 1,058,844. 57d 2/01. 4/26/57. W. Lässig and E. Günther to Agfa. From Ansco Abstracts, Vol. 19, No. 7, July 1959, Abs. 875. Silver images are rendered receptive for greasy ink by conversion to salts or complex compounds with organic substances having as -SH, -SeH or -NH group and a carbon chain of at least 12C atoms. The compounds are applied as 1 - 10% aqueous solutions after bleaching the silver image to silver chloride. The examples cite aliphait as well as heterocyclic compounds, e. g.



A LOOK AT HARD METAL PLATES, Matt Schillen. National Lithographer, Vol. 66, No. 8, Aug. 1959, pp. 21-2, 55, 3 pages. Polymetallic plates have advantages in sharpness, tone quality, and resistance to abrasion; but can give trouble in chemical control and ink-water balance. Specific suggestions are given on these points. This is carried out for certain commercially available plates, including: Lithure, Lithure Aluminum, Lithengrave, and Aller.

PRINTING SURFACES (IN PHOTO-LITHO NOTES). J. S. Mertle. National Lithographer, Vol. 66, No. 8, Aug. 1959, p. 66, 1 page. Describes several new surfaces, including: paper, cellulose derivatives, metal-backed cellulose ester, presensitized aluminum, anodized aluminum, and deep etch.

*PHOTOPOLYMERIZABLE COMPOSITIONS. Brit. Pat. 815,277. 12/8/56 - 6/24/59. E. L. Martin to DuPont. From Ansco Abstracts, Vol. 19, No. 8, Aug. 1959, Abstract 974. The compositions consist of polyvinyl acetals and/or esters and/or ethers with 10-25% of a vinylidine monomer forming a homogeneous transparent mixture with them, and .05 - 10% of an addition polymerization catalyst such as a benzoin ether or ketaldonyl compound. For firm printing images in layers 10 - 50 mils thick the polymer should have a maximum of 15% of free hydroxyl groups and the substituents should have at most 12 C atoms. The aldehyde or acid components can be in part saturated. Some such components are obtained by condensing hydrolyzed polyvinyl acetate with p-sorboyloxybenzaldehyde, or with cinnamic acid. 11 process and product claims.

*PHOTOPOLYMERIZABLE COMPOSITIONS. U. S. P. 2,893,868. 96/115. 8/22/55 - 7/7/59. A. L. Barney to DuPont. From Ansco Abstracts, Vol. 19, No. 8, Aug. 1959, Abs. 975. Compositions suitable for printing reliefs consist of polymers having a molecular weight of at least 2500 with a plurality of salt-forming acid or basic groups (e.g. a methyl methacrylate-methacrylic acid copolymer) of a vinilidine monomer (e. g. β -diethylaminoethyl methacrylate) and a catalyst for polymerization on exposure to light (180-700μ) or heat (2. g. benzoin methyl ether). The resulting ionically crosslinked polymer is resistant to nonpolar organic solvents which dissolve the original unexposed polymer-monomer mixture. 15 product claims.

DICHROMATED COLLOIDS IV. H. L. Howard and G. C. Wensley. Process, Vol. 66, No. 787, Aug. 1959, pp. 235-42, 8 pages. This part deals with the relative sensitivities of the dichromates of ammonium, sodium and potassium sensitizing gelatin as used in gravure. Some of the chemistry of gelatin is discussed. The preparation of the sensitizing solutions and the procedure in testing is given. The results are shown in some detail in tables and graphs and illustrated with step wedges printed by gravure. Among the conclusions is the one that sodium dichromate is fully equivalent to potassium dichromate and can be used as a replacement.

KODAK EKTALITH PROCESS. Herbert P. Paschel. Photo Methods for Industry, Vol. 2, No. 9, Sept. 1959, p. 22, 1 page. Brief story on platemaking for short run offset duplicating based on the Kodak Verifax photo duplicating process. The sensitive plate material is fast enough to be used directly in a camera if desired.

NEW PRE-SENSITIZED PLATE. Herbert P. Paschel. Photo Methods for Industry, Vol. 2, No. 9, Sept. 1959, pp. 20, 22, 2 pages. Algraphy in Britain has introduced a plate with exceptional press durability, claimed to have advantages over the usual diazo pre-sensitized plates. The coating is a light-sensitive resin with high ink receptivity, greater toughness, greater thickness, withstands wear better (runs of 100,000 obtained). Base metal is anodized aluminum. It is available only in duplicator sizes at present.

PRESSMAN MUST KNOW CAUSES OF LITHO PLATE BLINDING. George M. Halpern. Inland and American Printer and Lithographer, Vol. 143, No. 6, Sept. 1959, pp. 68-9,86, 3 pages. Early plate blinding is usually a fault of faulty platemaking. Some specific causes of poor platemaking are given. Abrasive materials in ink or paper coating can cause late blinding. Poor plates should not be run, should be replaced. L.T.F.'s Nicohol Treatment helps preserve deep-etch plate images.

DARKROOM AND PLATEMAKING IN OFFSET UP-TO-DATE. Anon. Der Polygraph, 18-1959, 20 Sept. 1959, pp. 881-3, 3 pages. (In German)

REARRANGING THE PROCESS DEPARTMENT. Anon. Der Polygraph, 18-1959, 20 Sept. 1959, pp. R25-R28, 4 pages. (In German)

OFFSET PLATES AND CHEMICALS ON THE GERMAN MARKET. Anon. Der Polygraph, 18-1959, 20 Sept. 1959, pp. 021-023, 3 pages. (In German)

PAPER AND INK

*METHOD FOR MEASURING THE RUB RESISTANCE OF PRINT. British Standards Institution. Brit. Stand. 3110:1959, 2 Park St., London W1, 4s. Details are given of three types of instruments which can be used for the test: (1) A reciprocating arc instrument available from Ault & Wiborg Ltd.; (2) the Patra rotary instrument, available from H. W. Wallace & Co., Ltd., Croydon; (3) a hand reciprocating instrument, details of which can be obtained from Thomas Hedley & Co. Ltd. From Printing Abstracts, Vol. 14, No. 6, June 1959, Abstract No. 1988.

*OUR PAPER. Anon. Graphia, Bern, Vol. 38, 1959, pp. 16-9 (in German). The influence of paper-making conditions and materials on the properties of paper of interest to the printer, e.g., opacity, surface, sizing, smoothness, volume, whiteness, picking, fluffing, strength, absorption and dimensional stability is shown in tabular form. Raw materials, beating, speed of paper machine, calendering and moisture affect these properties. From Printing Abstracts, Vol. 14, No. 6, June 1959. Abstract No. 1976.

*PRINTING TROUBLES DUE TO TOO GREAT CURLING TENDENCY OF (A WOOD-FREE WRITING) PAPER. Anon. Fogra-Mitt., No. 20, Mar. 1959, p. 9 (in German). Curling is generally due to excessive damping expansion; in this case it was 0.172% in the machine direction and 0.4% in the cross direction. In the case of letterpress printing the temperature and humidity conditions in the paper store and the pressroom should be the same, whereas in the case of offset printing the store should have an RH 5-8% higher than that of the pressroom. From Printing Abstracts, Vol. 14, No. 6, June 1959. Abstract No. 1974.

*INFLUENCE OF LIGHT, WARMTH AND MOISTURE ON THE DRYING OF PRINTING INKS. Hostmann-Steinberg. Drucker, No. 35, Mar. 1959, p. 7 (in German). IG Druck u. Papier, Stuttgart, Rote Strasse 2A, Germany. Heat accelerates oxygen uptake; excessive humidity retards it. However too dry air does not produce a good effect on the binding of the ink. Delivery of fresh prints to form high piles make air access difficult, so that the ink often dries more rapidly at the edges of the sheet than at the center. Daylight considerably accelerates drying. The papers and boards used for printing also influence the drying time. From Printing Abstracts, Vol. 14, No. 6, June 1959. Abstract No. 1942.

*THE VISCOSITY OF PRINTING INKS. H. Stiehler. Papier u. Druck, Vol. 8, No. 2, Feb. 1959, Druck u Repro. pp. 28-32 (in German). After considering the flow characteristics (plasticity and thixotropy) of ink, the article discusses the results of rheological investigations on printing inks, carried out with a rotation viscometer, developed at I.G.T., and based on a model by H. Green. The design of suitable viscometers is outlined and consideration is given to the dependency of thixotropy on temperature. From Printing Abstracts, Vol. 14, No. 6, June 1959, Abstract No. 1952.

DRIERS IN PRINTING INKS. K. Hanisch. The Litho-Printer, Vol. 2, No. 7, July 1959, pp. 4-5, 7. 3 pages. Metals are the active ingredients of driers for printing inks. Of a wide range of metals which have drying effects, cobalt, magnesium and lead are most effective. Normal quantities of active ingredient to be added are given for these metals. Variations from these can be due to the pigment or dye content of the ink or various additives. Other aspects of drier usage discussed include paper, over dosage, and odor.

TRISTIMULUS METHOD OF BRIGHTENER EVALUATION. Richard S. Hunter. Southern Pulp and Paper Manufacturer, Vol. 22, No. 9, Sept. 10, 1959, p. 52, 1 page. (Abstract of a paper given at the 10th Testing Conference, TAPPI, Portland, Ore., Aug. 17-21, 1959.) Optical brighteners are blue-fluorescing dyes. This paper explores the use of the tristimulus reflectometer in evaluating the performance of these dyes.

EVALUATION OF OPTICAL BLEACHES WITH A BECKMAN DK-2 SPECTROREFLECTOMETER. F. Grum and T. Wightman. Southern Pulp and Paper Manufacturer, Vol. 22, No. 9, Sept. 10, 1959, p. 52, 1 page. (Abstract of a paper given at the 10th Testing Conference, TAPPI, Portland, Ore., Aug. 17-21, 1959.) It is shown that a Beckman DK-2 spectroreflectometer can be modified and used for the measurement of the brightness of samples containing optical bleaches which fluoresce. The method used is described.

METHODS OF USING THE I.G.T. PRINT TESTER FOR PREDICTION OF PROPERTIES OF PULP, PAPER AND COATING IMPORTANT IN THE PERFORMANCE AND QUALITY OF PRINTING PAPERS. A. Glassman. Southern Pulp and Paper Manufacturer, Vol. 22, No. 9, Sept. 10, 1959, p. 121, 1 page. (Abstract of a paper given at the 10th Testing Conference, TAPPI, Portland, Ore., Aug. 17-21, 1959.) Paper outlines methods developed by Donnelley to predict: 1. Show-through. 2. Letterpress pick. 3. Offset performance with respect to pick. 4. Impression tolerance. Tests with the I.G.T. correlated with actual press results better than some TAPPI tests.

LITHOGRAPHIC FLUORESCENT INKS. Anon. Harris Impressions, No. 108, Aug. 1959. Brief tips are given on printing DAY-GLO inks by lithography.

PAPER: BOND PAPERS. William H. Bureau. Graphic Arts Monthly, Vol. 31, No. 9, Sept. 1959, pp. 48, 50, 2 pages. Bond papers are made from either all-chemical wood pulp, or a mixture of that with rag. Necessary properties include withstanding rough handling, erasure, folding, filing, typing, pen and ink writing, and permanence. The ingredients and making of such papers are described and the grades available listed and described.

OPACITY: KEY TO SOME PAPER PROBLEMS. Charles V. Morris. Offset Duplicator Review, Vol. 9, No. 9, Sept. 1959, pp. 28, 48, 50, 3 pages. Lack of opacity leads to show-through and is related to strike-through. Various improvements in opacity are discussed. Tables list data on opacity characteristics of various papers.

NEW MULTIPURPOSE GLOSSMETER. Anon. Journal of the Optical Society of America. Vol. 49, No. 9, Sept. 1959, p. 933, 1 page. A brief note on a new photoelectric glossmeter which has been designed for papers, paints, etc. For the paper industry it will measure gloss of coated book papers by TAPPI 75° method T400m-51, waxed and low gloss papers by other TAPPI methods.

PAPERS FOR PACKAGING. Frederick T. Day. Canning and Packing, Vol. 24, No. 345, Sept. 1959, pp. 16-9, 4 pages. A review of developments in packaging papers and boards under the following headings: Release-coated papers, barrier coated papers, heat-sealing papers, pressure-sensitive labelling, tropical gummed papers, cellulose transfer labels, and others similar.

QUALITY CONTROL IN PRINTING INKS. Anon. American Ink Maker, Vol. 37, No. 10, Oct. 1959, pp. 37, 39-40, 3 pages. Advances in printing and printing ink technology requiring closer control of ink manufacture are cited. Some 22 of the many scientific instruments employed in modern printing ink laboratory practice are listed with a paragraph on each explaining its function.

PROGRESS OT TODAY'S OFFSET PAPERS. John Kronenberg. National Lithographer, Vol. 66, No. 10, Oct. 1959, pp. 50, 103-4, 3 pages. (Abstracted from a talk at Lithoshow and Forum, Lithographic Division, New York Employing Printers Assoc., May 2, 1959. The use of pigment in paper coatings has improved lithographic paper printability. The evolution of these coatings is given in a seven step list. Six different methods of applying coatings are given. Other improvements mentioned are: beta ray gauges for thickness and weight, stock metering devices, moisture control, inspecting and sorting equipment.

CHANGES IN AIR HUMIDITY AND THEIR INFLUENCE ON PAPER AND INK IN THE LITHOGRAPHIC PROCESS. R. Müller. Der Polygraph, 7-1959, 5 April 1959, pp. 09-012, 4 pages (in German).

PROBLEMS OF MULTI-COLOUR PRESS OFFSET WET-ON-WET PRINTING. Anon. Der Polygraph, 18-1959, 20 Sept. 1959, pp. 024, 893, 2 pages (in German).

LITHOGRAPHY - GENERAL

"KOMOTRON" ELECTRONIC CONTROL FOR OFFSET PRESS. Mitsuru Okozaki. Asian Printer, Vol. 2, No. 2, 2nd Quarter 1959, pp. 48-9, 2 pages (in English). The Komotron uses photoelectric cells and electronic circuitry to run continuous checks on press operations. Different units function as follows: "O" checks feeding past stops; "F" checks register marks; "D" checks feeding of doubles; "S" checks side guide operation; "P" controls trip; "M" controls damping by detecting the quantity of water on the plate; and "L" checks water level in the fountain. Combinations of functions are possible.

THE FUTURE OF THE PROCESSES: LITHOGRAPHY. Paul Lyle. Proceedings of the 9th Annual Conference of the Research and Engineering Council of the Graphic Arts Industry, New York City, May 18-20, 1959, pp. 72-8, 7 pages. Past growth of lithography is cited, together with some speculation on the continuance of that growth. Continued growth will be related to the progress in areas where lithography has a disadvantage. Some items discussed in this connection include: jurisdictional problems with labor, cost of makeready related to short and long runs, color or black and white illustrations, and proofing. Lithography has advanced more rapidly technologically than other processes in the past 15 or 20 years. Other advantages are cited, as well as a list of disadvantages. Competition between printing products and other products for the users money is discussed.

B P MACHINERY SPECIFICATION SURVEY. 7. SMALL OFFSET. Anon. British Printer, Vol. 72, No. 7, July 1959, pp. 100-4, 106, 6 pages. Conclusion of a two part survey of single colour machines available in Britain. Specifications and illustrations of presses up to 18-1/2 x 24-1/2 in. size from 12 suppliers.

SAFETY IN THE PRESSROOM. Roy P. Tyler. National Lithographer, Vol. 66, No. 8, Aug. 1959, pp. 15-6, 89, 3 pages. Some items discussed include: guards on presses, electrical controls, handholds, railings, clothing around the press, sudden noises, first aid, and good housekeeping. Good safety tips are given on all of these points.

GOOD MAKEREADY SAVES TIME. Edward Kidby. National Lithographer, Vol. 66, No. 8, Aug. 1959, pp. 18, 52, 2 pages. Specific suggestions for packing plates and blankets for a four-color run on a two-color press; and on mixing ink and supplying it to the fountain.

WEB OFFSET - AN EVALUATION. Herbert A. Asten. National Lithographer, Vol. 66, No. 8, Aug. 1959, pp. 24, 26, 56, 3 pages. Press types are first grouped as: blanket-to-blanket (vertical or horizontal web travel) and blanket-to-steel (inline, common drum, split drum). Brief discussions cover: tension control and roll stands, plate and blanket cylinders with their locking devices and means of registration, and inking and damping devices.

*LITHOGRAPHIC PROGRESS AND PAPER PROBLEMS. M. H. Bruno. Paper Trade Journal, Vol. 143, No. 34, Aug. 24, 1959, p. 34, 1 page. Excerpts from a talk to the Salesmens Association. Major advances in the past two years are: 1. Improvement in quality of color reproduction. 2. Swing to use of aluminum plates. 3. New dampening systems. 4. Tremendous growth of web offset. These are discussed. Increased use of the L.T.F. evaluation services by paper mills is an encouraging indication of their recognizing the advantages of a better understanding of the needs and requirements of the process.

OFFSET BLANKET DEFECTS AND SOME REMEDIES. Anon. Lithographer and Offset Printer, Vol. 55, No. 8, Aug. 1959, pp. 17-8, 2 pages. A list is given of 23 different terms applied to blanket defects, mostly with the source of the defect identified. In some cases where such are possible, precautions to avoid these defects are also given.

MULTI-COLOR OFFSET ON ACETATE. Anon. National Lithographer, Vol. 66, No. 9, Sept. 1959, pp. 40-1, 2 pages. A description of how Burton Quaker Corp., New York, ran a six-color job on 43 x 58-1/2 in. .005 in. thick acetate sheet. The process colors were red,pink, blue, and black, with solid blue for background and white for lettering. Special problems involved static, ink balance, and selection of the proper blanket. Details of running the job are given.

WEB OFFSET - AN EVALUATION. Herbert A. Asten. National Lithographer, Vol. 66, No. 9, Sept. 1959, pp. 63-4, 2 pages. Conclusion of a series. Dryers can be the steam drum type when one side of the web is printed at a time. Since most web offset perfector presses are of the blanket-to-blanket type, the straight through gas or electric heat type is more common. This is followed by water cooled chill rolls to cool the web. Rewind, sheet, or fold are normal terminal operations and each is described and discussed. A summing up of the entire series points out the advantages of web offset, particularly speed, and concludes that "The future outlook of web offset is bright indeed."

WHAT YOU SHOULD KNOW ABOUT PACKING PAPERS. Anon. Modern Lithography, Vol. 27, No. 9, Sept. 1959, p. 62, 1 page. A study of packing paper practice at the plant of Empire Color Lithographers shows specialized storage arrangements for papers 0.002, 0.003, 0.004, 0.005, and 0.010 in handy for the presses. Other thicknesses are obtained by combining two or more sheets. Special packing sheet is preferred over ordinary stock. Apparently there are two schools of thought on which way of the cylinder the packing paper grain should run. Two suppliers of specialized packing paper are listed.

CLEANLINESS OF IN BETWEEN COLORS. Paul J. Hartsuch. Modern Lithography, Vol. 27, No. 9, Sept. 1959, pp. 82, 85-6, 89, 171, 173, 6 pages. From a talk delivered at the 11th Annual Meeting of the Technical Association of the Graphic Arts, Inc., Rochester, N. Y., June 15-17, 1959. Author's Abstract. A study of process inks has shown that the cleanliness of the inbetween colors (greens, oranges, reds, violets and blues) is a function both of the hue and the cleanliness of the process inks. A table is given which will predict how a change in the hue or the cleanliness of a particular process ink will affect the cleanliness of the in between colors.

For example, the cleanliness of the magenta and the cleanliness of the yellow determine the cleanliness of the reds and oranges made with them rather than the hues of either ink. But the hue of any fairly clean magenta is responsible for the relative cleanliness or dirtiness of the blues and violets made with it, assuming that the same cyan is used in each case.

It is possible to arrive at these conclusions from reflection density measurements of proofs of the process inks and the in between colors made with them. Several examples are given to illustrate these points.

INK PILING ON ROLLERS. (IN "PRODUCTION CLINIC"). Frank Arbolino. Modern Lithography, Vol. 27, No. 9, Sept. 1959, pp. 101, 161, 2 pages. Answers to a number of questions on the subject. Waterlogging or emulsification is the most common cause of ink piling on rollers. Among the causes which are discussed and remedies offered are: forms requiring very little ink; wrong method of feeding ink to rollers; failure to shorten the ink sufficiently. It is suggested that the pressman familiarize himself with the appearance of the inking rollers when they are feeding ink properly.

WEB OFFSET COMES OF AGE. Hy Safran. Graphic Arts Monthly, Vol. 31, No. 9, Sept. 1959, pp. 68, 70, 74, 76, 78, 5 pages. For long run weekly magazines, web offset has some advantages, such as: flexibility in color, positioning and reduction or enlargement of copy at minimum costs. Simplicity and speed of makeready mean maximum flexibility in setting deadlines. A new Harriss-Cottrell 10-color web offset press is being added to the three older web offset presses in the Safran plant. Other information is given on the Safran plant and the quality of work that is being done there on web offset.

CRABTREE'S TWO COLOUR 'COUNTESS'. Anon. Printing World, Vol. 165, No. 5, Sept. 9, 1959, pp. 127, 152. 2 pages. A most interesting appearing offset press incorporating several new features: A hydraulic tripping system controlled from a selector panel operates manually or automatically; A drum-type inking arrangement; A seven roller dampening system; Electrically linked guards; Extensive use of ball and roller bearings. Sheet size is 26 x 39 in. and speed 10,000 iph. The illustration shows an unusual press arrangement.

MORE LIKE OFFSET THAN LETTERPRESS. J. W. Rockefeller. Printing Magazine and 'The Offset Printer'. Vol. 83, No. 10, Sept. 1959, pp. 69, 72, 2 pages. (One of a series.) Wrap-around plates are more likely to be used successfully by offset printers than by exclusively flatbed letterpress printers because the process is more like offset than letterpress. A general discussion of wrap-around plates printed direct or (dry) offset, depth of etch requirements, availability of plates and presses, plastic plates, gelatin relief plates, etc.

THE HOW AND WHY OF CARTON LITHOGRAPHY. CHAPTER 12. DESCRIPTION AND INTRODUCTION TO LITHO PLATES. John Jachimiec. Boxboard Containers, Vol. 77, No. 801, Sept. 1959, pp. 39-41, 3 pages. A comparison and evaluation of the performance of lithographic plates used on folding cartons. Metals, graining and coating are discussed. Surface, deep etch, bimetallic and pre-sensitized plates are described and their characteristics discussed.

THE NEXT TEN YEARS IN LITHOGRAPHY. Michael H. Bruno. Lithographers Journal, Vol. 44, No. 6, Sept. 1959, pp. 10-12, 57, 4 pages. Predictions are based on what is in research now and will be in general use in 6 to 10 years. Some advances of the past few years are cited and the need for time and persistence shown. Big changes are expected in dampening, and the Mullen, parchment covered roller, and Dahlgren systems are described, and some of their background given. Emulsion inks which will not require a dampening system may now be possible. Ink distribution systems are due for redesign as inks and dampening systems change. Blankets are discussed and needed improvements noted, and the possibility of their elimination by return to direct lithography considered. Faster drying inks and truer process colors should come. Paper changes should bring less susceptibility to change in humidity, and more brilliant whites. Plates will be presensitized or precoated, longer running and on purer metals. Continuous tone may come. Electrostatic platemaking methods can become important. Other phases of lithography expected to grow are: electronic color separation, phototypesetting, camera color composing, web printing, automation in various forms, control of print quality. Research is the key to the future.

CORRECT OFFSET PRESS PACKING WILL REDUCE AMOUNT OF WEAR ON LITHO PLATE. Anon. Printing Production, Vol. 89, No. 12, Sept. 1959, p. 74, 1 page. "An error of .002" can ruin quality, run up lost time, produce a lot of waste, and finally spoil the plate." Proper method of packing a press is given briefly.

METAL DECORATING BY LITHOGRAPHY. Henry B. Ryan. Inland & American Printer and Lithographer, Vol. 143, No. 6, Sept. 1959, pp. 37-9, 3 pages. A well illustrated story

on metal decorating as done by J. L. Clark Mfg. Co. in two plants (Rockford, Ill. and Lancaster, Pa.). Product is carried from design and art work through to finished item in integrated plants. Facilities are described.

HOW TO LAY OUT OFFSET PRESSROOM. Charles W. Latham. Inland and American Printer and Lithographer, Vol. 143, No. 6, Sept. 1959, pp. 50-2, 3 pages. Several press layouts are shown with various positions for delivery in relation to windows, aisles, etc. Space allotted depends upon type of press, kind of work, pressroom turnover and other conditions. Good planning of details can make a real difference.

MODERN LITHOGRAPHIC PLANT SAFETY. Walter R. Smith. Inland and American Printer and Lithographer, Vol. 143, No. 6, Sept. 1959, pp. 48-9, 2 pages. Some specific suggestions are given on safeguarding life, limb and health of employees in platemaking department and pressroom.

NEW OFFSET DEVELOPMENTS. Charles Shapiro. Modern Lithography, Vol. 27, No. 10, Oct. 1959, pp. 52, 54, 135, 137, 4 pages. From a talk at the 40th Annual Convention, International Association of Printing House Craftsmen, New York, Sept. 7, 1959. Recently adopted or growing techniques mentioned include contact screens; autoscreen films; masking; electronic scanning; platemaking advances in several forms all leading to finer grain or no grain and less water and longer runs; wipe-on coatings and brush graining. For the future, the author brings in recent L.T.F. work on process color ink standardization, on continuous tone lithographic printing, and on newer processes getting away from the grease-water relationship and permitting multicolor printing from one plate.

TIPS FOR THE PRESSMAN. Jack E. Spencer. Modern Lithography, Vol. 27, No. 10, Oct. 1959, pp. 53, 55, 133, 135, 4 pages. From a talk at the 40th Annual Convention, International Association of Printing House Craftsmen, New York, Sept. 8, 1959. A discussion of recent and forthcoming improvements in offset presses. Some items mentioned are improved sheet transfer with cam operated grippers; low pressure large volume air blower sheet control; side-guide non-register signal; continuous feeders; double deliveries; and pre-registered plates. For the dampening system, author mentions paper dampener roller covers, and the Mullen and Dahlgren dampening systems. Web offset is also mentioned.

THE HOW AND WHY OF CARTON LITHOGRAPHY. CHAPTER 13. SURFACE AND PRESENSITIZED PLATES. John L. Jachimiec. Boxboard Containers, Vol. 77, No. 802, Oct. 1959, pp. 37-9, 3 pages. Preparation procedures are given for the surface plate and the presensitized plate. Surface plates are simple to make and offer fine reproduction. Presensitized plates are sensitive to abrasion but have advantages which lead to their use in carton lithography, some in production, some in proofing prior to production runs.

FUTURE PROBLEMS IN MAP REPRODUCTION. Karl-Heinz Meine. Der Polygraph, 1-1959, 5 Jan. 1959, pp. 13-15, 3 pages (in German).

COMMON SETTING AND OPERATING FAULTS ON OFFSET PRESSES. S.H.H. Der Polygraph, 14-1959, 20 July 1959, pp. 017-018, 2 pages (in German).

DAMPENING AND ITS INFLUENCE ON THE INK. H. J. Der Polygraph, 14-1959, 20 July 1959, pp. 019-020, 2 pages (in German).

SIZE HOLDING OF PRINTING ROLLERS. Anon. Der Polygraph, 18-1959, 20 Sept. 1959, p. 864, 1 page (in German).

GRAPHIC ARTS - GENERAL

RELATION BETWEEN GRAININESS AND GRANULARITY FOR BLACK-AND-WHITE SAMPLES WITH NONUNIFORM GRANULARITY SPECTRA. Keith F. Stultz and Hans J. Zweig. Journal of the Optical Society of America 49, No. 7, July 1959, pp. 693-702, 10 pages. In order to determine the relation between the visual impression of graininess and the objectively determined granularity of a wide range of granularity types, a series of samples was prepared containing uniformly exposed black-and-white materials and prints (transparencies) containing varying degrees of mottle. These samples were judged by the method of paired comparisons at different magnifications and scanned to obtain the standard deviation σ (D) for a wide range of scanning apertures. The psychophysical relationship between the two functions, (1) graininess versus magnification and (2) granularity σ (D) versus the square root of the scanning area, depends on the character of the scanning operation performed by the eye. An estimate of the size of the effective scanning spot of the eye can be obtained from these data.

*STATIC ELECTRICITY IN PRINTING. L. Young. Litho-Print, Vol. 2, No. 3, Mar. 1959, pp. 11-2. The causes and prevention of static electricity are briefly discussed. From Printing Abstracts, Vol. 14, No. 6, June 1959, Abstract No. 2170.

LAWS LIBERALIZED ON PRINTING ILLUSTRATIONS OF STAMPS, MONEY AND BONDS. Anon. American Pressman, Vol. 69, No. 7, July 1959, pp. 6-8, 3 pages. An article, prepared by the U. S. Secret Service, Treasury Department, explaining what is permissible under Public Law 85-921, 85th Congress approved by the President on Sept. 2, 1958.

*PROTECTIVE COATINGS FOR ELECTROPHOTOGRAPHIC LAYERS. L. Owens to Horizons, Inc. U. S. P. 2,886,434. 96/1 6/6/55-5/12/59. From Ansco Abstracts, Vol. 19, No. 6, June 1959, Abs. 726. Photoconductive selenium layers excel in sensitivity but have low resistance to chemical attack and to abrasion, for example during cleaning of a plate for re-use. For protection a thin layer of a material of an electrical resistance at least equal to the dark resistivity of the selenium, having a thickness of .01 - .1 mil, about 1/10 that of the sensitive coating, is applied. The preferred material is zinc sulfide. Heating the coated product for 1-2 h at 80-200 C materially improves it. Silica, titania and alkaline earth metal fluorides are also mentioned as suitable coating materials. 11 process and product claims.

*PHOTOGRAPHIC RELIEF PROCESS. W. D. Peterson and R. W. Fabian to T. J. Moran's Sons, Inc. Can. 576,035. 12/7/53-5/19/59. From Ansco Abstracts, Vol. 19, No. 6, June 1959, Abs. 741. The sensitive material consists of a sensitizer capable of liberating gas upon exposure, imbedded in a gas-permeable plastic of variable rigidity, such as gelatin. The gas liberated on exposure at room temperature is retained in the gelatin, but upon heating for 2-3' at 225 F in contact with a thermoplastic receptor, such as cellulose acetate, under a pressure of 40 lb./in.^{2} expands and causes the exposed areas to penetrate into the plastic, thus forming simultaneously a negative and a positive relief image which can be separated after rehardening on cooling. 23 claims.

*ELECTROSTATIC PHOTOGRAPHY WITH CHEMICAL IMAGE FORMATION. German Application 1,057,449 57b 10 6/14/57. U. Schmiedel and H. Fischer to Technophot Dr. R. Fischer KG. Ansco Abstracts, Vol. 19, No. 6, June 1959, page 285. The developer powder for an electrostatic image contains a compound capable of reacting with another compound present in the print paper. In one example zinc oxide paper is developed with a mixture of 5% iron stearate with 95% of glass spheres and then placed in contact with paper coated with a saturated alcoholic solution of gallic acid and moistened with 80% alcohol prior to the transfer. Heat accelerates formation of a neutral black image. In another example the powder contains the zinc chloride double

salt of diazotized 5-amino-2-benzoylamine-1,4-diethoxybenzene and monosodium phosphate, the paper phloroglucinol.

*PHOTOGRAPHIC RELIEF PROCESS. Canadian Patent 576,035. 12/7/53-5/19/59. W. D. Petersen and R. W. Fabian to T. J. Moran's Sons, Inc. Ansco Abstracts, Vol. 19, No. 6, June 1959, page 281. The sensitive material consists of a sensitizer capable of liberating gas upon exposure, imbedded in a gas-permeable plastic of variable rigidity, such as gelatin. The gas liberated on exposure at room temperature is retained in the gelatin, but upon heating for 2-3' at 225F in contact with a thermoplastic receptor, such as cellulose acetate, under a pressure of 40 lb/in^2 expands and causes the exposed areas to penetrate into the plastic, thus forming simultaneously a negative and a positive relief image which can be separated after rehardening on cooling.

*ZINC OXIDE LAYERS FOR ELECTROPHOTOGRAPHY. Can. 576,729. 12/26/56-5/29/59. J. G. Jarvis to Kodak. From Ansco Abstracts, Vol. 19, No. 6, June 1959, Abs. 743. A resinous photoconductive zinc oxide coating on a support carries a second resinous photoconductive layer with .1 - 1 g. of zinc oxide which has been sensitized by .001 - .5% of an optical sensitizing dye. 5 process and product claims.

*ELECTROSTATIC PRINTER. U. S. P. 2,892,709. 96/1. 3/7/55-6/30/59. E. F. Mayer to Gen. Dynamics Corp. From Ansco Abstracts, Vol. 19, No. 7, July 1959, Abs. 869. In the printer two drums rotate in contact in opposite directions. One moved around a light source. It is transparent and covered with a transparent conducting layer such as evaporated gold with bismuth, tin oxide or other additions, which is followed by the photoconductive surface of selenium or another suitable material. The other drum has a metal core covered with conducting rubber and passes through a pan containing developer powder, preferably a disperaion of carbon black in kerosene or a chlorinated hydrocarbon. The pigment image is transferred to an endless roll of paper passing over another roller. With application of potentials of 300-900V. between the (negative) metal roller and the (positive) conducting layer of the illuminated roller print speeds in excess of 8 ft./min. have been reached. 4 process and device claims.

*INTERMITTENT ELECTROPHOTOGRAPHIC PRINTER. U.S.P. 2,878,120. 96/1. 7/3/56-3/17/59. E. F. Mayer to Horizons, Inc. From Ansco Abstracts, Vol. 19, No. 7, July 1959, Ab. 870. An image is produced by a cathode ray tube, lens and mirror on a selenium-coated cylinder which has been charged to a potential of several hundred V by a semiconducting rubber roller. The image is developed by passing the roller through a liquid where pigment attaches itself to the exposed areas and is then transferred on a paper strip, a line at a time. A soft gelatin composition roller applies solvent to the selenium-coated cylinder to clean its surface for the next exposure. 9 method and apparatus claims.

DATA STORAGE AND DISPLAY WITH POLARIZED PHOSPHORS. H. P. Kallmann and J. Rennert. Electronics, Vol. 32, No. 35, Aug. 28, 1959, pp. 39-41, 3 pages. Research in photoconductors shows that a phenomenon known as persistent internal polarization may be used to store data on a phosphor by producing a separation of charges with d-c fields and radiation.

WHAT YOU SHOULD KNOW ABOUT MAGNIFIERS. Axel Lundbye. Gravure, Vol. 5, No. 8, Aug. 1959, pp. 23-4, 26, 52-3. First of two parts. Magnifiers and how they work are described briefly with the aid of diagrams and formulae. A Magnifier Selector Chart shows what standard lenses are available in various lens diameters and powers.

SIMPLE TESTS FOR IDENTIFYING TRANSPARENT FILMS. C. L. Blair. Flexography, Vol. 4. No. 6, July-Aug. 1959, pp. 21-3, 60, 4 pages. Simple tests are given, most of which can be performed on an office desk. Tear, burning and other tests are described, and a chart aids in identifying materials.

FROM PAPER DOLLS TO PUSH BUTTONS. Warren L. Rhodes. New England Printer and Lithographer, Vol. 22, No. 7, Aug. 1959, pp. 58-9, 2 pages. Taken from a talk given before the Boston Litho Club and the Boston Club of Printing House Craftsmen. The author points out that the printing industry's big advances in the last few years have not been so much in automation as in mechanization, standardization and control. Some examples are cited.

HOW'S YOUR RESEARCH BUDGET? J. Homer Winkler. Modern Lithography, Vol. 27, No. 10, Oct. 1959, pp. 59-60, 125-8, 6 pages. From a talk at the PIA Convention, New York, Sept. 7-11, 1959. Discussion of advancements between the 1950 and 1959 Graphic Arts Expositions. A few of the more recent are mentioned. Certain pressures for advancement are cited, including the entry into the graphic arts machinery and supply industry of companies formerly outside, having large, well-equipped research laboratories and sizeable research budgets; such as DuPont, R.C.A., Fairchild, G.E., 3M, Dow and others. The industry is urged to: 1. Assign someone to keep informed on new developments. 2. Organize to move swiftly. 3. Employ technically trained personnel. 4. Plan ahead for sizeable capital investments. 5. Support Research.

EXPERIMENTAL STUDY OF RMS GRANULARITY AS A FUNCTION OF SCANNING-SPOT SIZE. George C. Higgins and Keith F. Stultz. Journal of the Optical Society of America, Vol. 49, No. 9, September 1959, pages 925-929, 5 pages. Experimental data on the constancy of Selwyn granularity, $S = \sigma(D) \cdot (2a)^{\frac{1}{2}}$, with variations in scanning-aperture diameter are presented. Selwyn granularity S is found to be essentially constant for a series of aperture diameters from 7.5 to 384 μ if the sample is clean and has no macroscopic variations in density. The effect of sample imperfections, such as density, wedging, streaks, scratches, and dirt is discussed.

LETTERPRESS DEAD? BALDERDASH! Joseph Chanko. New England Printer and Lithographer, Vol. 22, No. 8, Sept. 1959, pp. 54-7, 4 pages. Five advantages of letterpress are cited as: 1. Wide range. 2. Availability. 3. Flexibility. 4. Quality. 5. Economy. These are discussed. A list is given of 19 important advances made by the industry in the last 25 years. Certain needs for the future are listed and it is suggested that the industry put more support into pure research.

GRAPHIC SCIENCES RESEARCH AT STANFORD RESEARCH INSTITUTE. Anon. Graphic Arts Monthly, Vol. 31, No. 9, Sept. 1959, pp. 200, 202, 204, 3 pages. Stanford Research Institute has established a Graphic Sciences program for the improvement of printed communication. Contributions can come from work in electronics, mechanics, pneumatics, hydraulics, chemistry, physics and economics. Some work that the Institute has done in these fields is reported.

DIRECT PRINTING PLATES WITH GELATIN RELIEF. Herbert P. Paschel. Photo Methods for Industry, Vol. 2, No. 9, Sept. 1959, p. 20, 1 page. Brief discussion of the European Filmklische, and the Guth plate (U.S. Pat. 2,709,654) and an experimental plate demonstrated by Kodak.

VIDEOGRAPH USES CATHODE-RAY TUBE TO PRINT IMAGE AT LIGHTNING SPEED. (From Photo Methods for Tomorrow.) Lloyd E. Varden. Photo Methods for Industry, Vol. 2, No. 9, Sept. 1959, pp. 12, 14, 2 pages. A new electronic system, called the Videograph Process, is capable of almost instantaneous image recording, although image quality is inferior to that obtainable by the photographic process. Speed is of the order of 20,000 letters, numbers, or similar symbols per second. The image is formed on a moving web of paper with a polystyrene coating by means of an electrostatic image, powder developed. The operation is described briefly.

COLOUR VISION AND THE PRINTER. Dean Farnsworth. Printing Technology, Vol. 3, No. 1, Sept. 1959, pp. 17-27, 11 pages (including discussions). A study of perceptual problems in vision related to printing. Thorough discussions are given on: color blindness and tests for it, such as the F-M 100 Hue Test and the I-S C C Colour Aptitude Tests; metamers (colorants of similar appearance but different spectral composition); lighting; area of colour; and induced contrasts (simultaneous or successive).

MR. PRINTER, YOU'RE TO BLAME FOR STATUS OF GRAPHIC ARTS RESEARCH. Marvin C. Rogers. Printing Production, Vol. 89, No. 12, Sept. 1959, pp. 44-7, 4 pages. First of a series on the misconceptions of research and why printing has 'missed out' on the benefits it brings. Quotations from industry and research leaders like Chanko, Zettlemoyer, Rhodes and Bruno are interspersed with comments by the author. Bruno compares the $10 billion chemical industry with its $250 million research, with the $8.5 billion graphic arts with only $6 million for research. The impact on the graphic arts of companies from research conscious industries with graphic arts interests (Fairchild, R.C.A., 3M, Hell, Dow, Photon, DuPont,(Kodak and others are listed) is discussed.

A METHOD OF CONTRAST CONTROL IN CONTINUOUS-TONE XEROGRAPHY. J. T. Bickmore, R. E. Hayford, and H. E. Clark. Photographic Science and Engineering, Vol. 3, No. 5, Sept.-Oct. 1959, pp. 210-4, 5 pages. Authors' Abstract. A method of contrast control is described suitable for xerographic printing of continuous-tone photographic negatives. The xerographic plate consists of a thin, photoconductive layer of vitreous selenium deposited on a conductive backing. It is sensitized by charging the selenium layer to a uniform potential. Exposure to an optical image produces a corresponding electrostatic image by partial photoconductive discharge of the surface. This image is developed with an aerosol containing charged black particles, the aerosol passing between the plate and a closely spaced electrode. A bias potential may be applied between the electrode and the conductive backing of the plate. With zero bias potential, exposed areas attract less powder, thus yielding a positive-to-positive reproduction. Conversely, negative-to-positive reproduction is produced when the electrode is biased to a potential higher than the highest potential remaining on the plate after exposure. In the latter case, contrast is dependent upon the relationship between bias potential and initial plate potential. Thus contrast may be continuously varied by means of a simple electrical parameter. Characteristic curves covering the contrast range of photographic printing papers are easily obtained. 2 references.

COMPETITION BETWEEN PRINTING PROCESSES. Anon. Der Polygraph, 14-1959, 20 July 1959, p. 631, 1 page (in German).